

BT
performing epitaxy to form raised source/drain regions;
forming a silicide on the gate and source/drain regions;
removing the spacer, thereby forming a void region between the source/drain regions and the gate;
performing a halo implant through the void, thereby forming a halo around the gate in the channel region; and
completing the MOSFET.

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sub C1
5. (AMENDED) A method of making a MOSFET, comprising:
providing a substrate having a gate oxide and gate thereon, the gate defining a channel region of no more than 50 nm length;
performing a vertical source/drain extension ion implant to a depth of approximately 10 nm to approximately 30 nm;
forming a spacer on the gate;
forming raised source/drain regions;
forming a silicide on the gate and source/drain regions;
removing the spacer, thereby forming a void region through the silicide between the source/drain regions and the gate;
performing a halo implant through the void, thereby forming a halo around the gate in the channel region; and
completing the MOSFET.

BB
10. (AMENDED) A method of making a MOSFET, comprising:
providing a substrate having a gate oxide and gate thereon, the gate defining a channel region of no more than 50 nm;
performing an approximately vertical source/drain extension ion implant to a depth of approximately 10 nm to approximately 30 nm;
forming a nitride spacer on the gate;
performing epitaxy to form raised source/drain regions;
forming a silicide on the gate and source/drain regions;
removing the spacer, thereby forming a void region through the silicide between the source/drain regions and the gate;